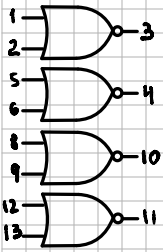
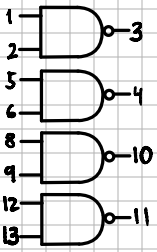
CD4001



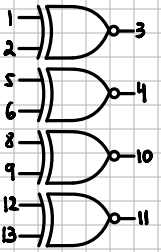
125, 60, 45ns

CD4011



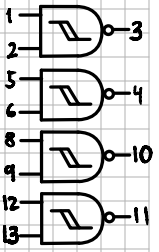
100, 50, 40ns

CD4077



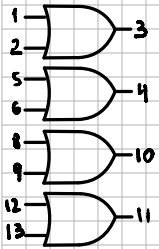
140, 65, 50ns

CD4093



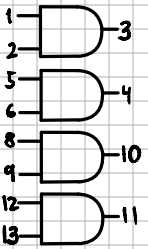
190, 90, 65ns

CD4071



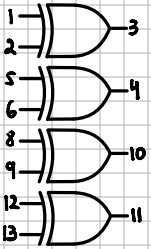
125, 60, 45ns

CD4081



125, 60, 45ns

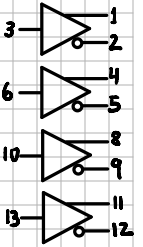
~~CD4030~~ CD4070



140, 65, 50ns

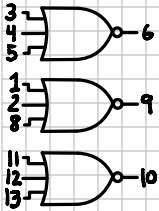
CD4041

+/- 10mA



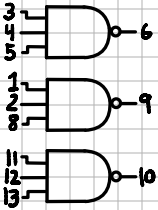
60, 35, 25ns

CD4025



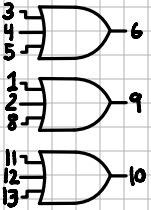
125, 60, 45ns

CD4023



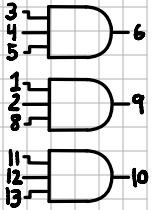
125, 60, 45ns

CD4075



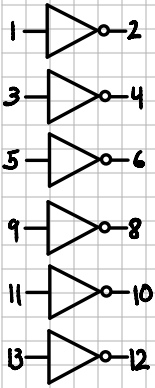
125, 60, 45ns

CD4073



125, 60, 45ns

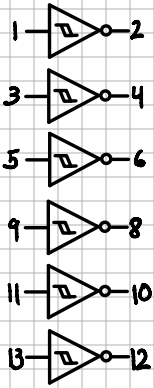
CD4069



55, 30, 25ns

CD40106

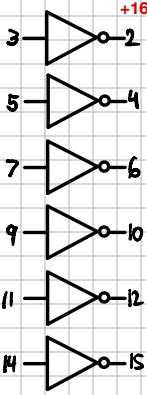
MC14584



140, 70, 60ns

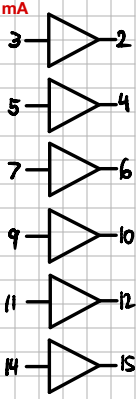
~~CD4009~~ CD4049U

+16/-3 mA



60, 32, 25ns

~~CD4010~~ CD4050

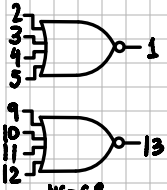


70, 40, 30ns

4009, 4010: $V_1=1$, $V_2=16$, $\perp=8$, NC=13

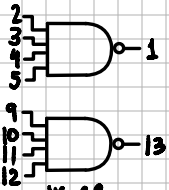
4049, 4050: $V_{cc}=1$, $\perp=8$, NC=13,16

CD4002



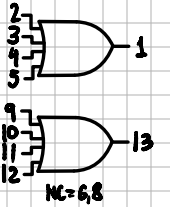
125, 60, 45ns

CD4012



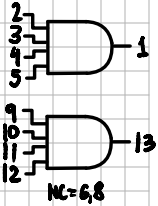
125, 60, 45ns

CD4072



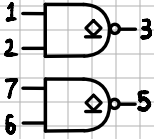
125, 60, 45ns

CD4082



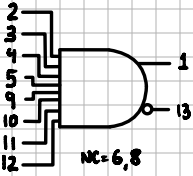
125, 60, 45ns

CD40107



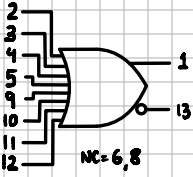
100, 60, 50ns

CD4068



150, 75, 55ns

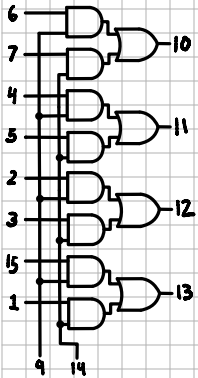
CD4078



150, 75, 55ns

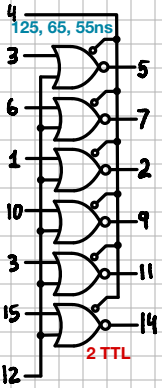
CD4519

CD4019



150, 60, 50ns

CD4502

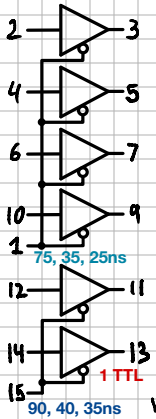


125, 65, 55ns

2 TTL

190, 90, 65ns

CD4503

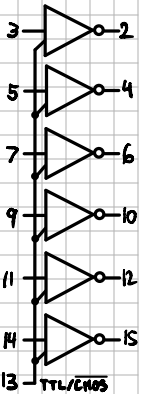


75, 35, 25ns

1 TTL

90, 40, 35ns

CD4504



$V_1 = 1$, $V_2 = 16$, $\perp = 8$

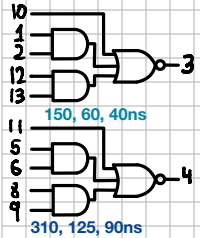
5-10, 5-15, 10-15

TH: 140, 140ns

LH: 120, 120, 70ns

HL: 275, 275, 70ns

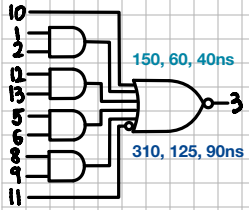
CD4085



150, 60, 40ns

310, 125, 90ns

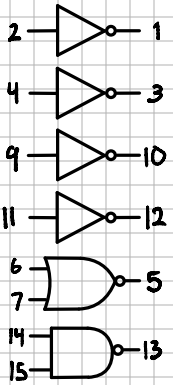
CD4086



150, 60, 40ns

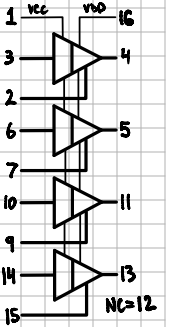
310, 125, 90ns

CD4572U



100, 55, 40ns

CD40109

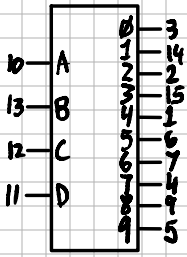


5-10, 5-15, 10-15

LH: 300, 220, 180ns

HL: 250, 250, 120ns

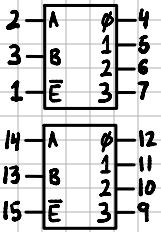
CD4028



175, 80, 60ns

CD4555

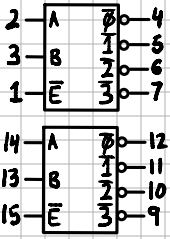
200, 85, 65ns



220, 95, 70ns

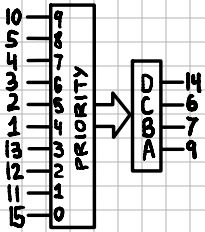
CD4556

200, 85, 65ns



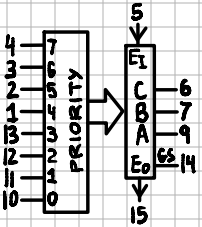
220, 95, 70ns

CD40147



450, 200, 150ns

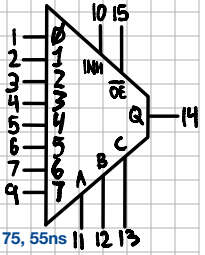
CD4532



220, 110, 85ns

CD4512

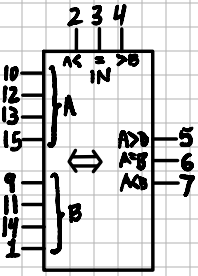
INH: 140, 70, 50ns
ABC: 200, 85, 60ns
OE: 60, 30, 20ns



180, 75, 55ns

CD4063

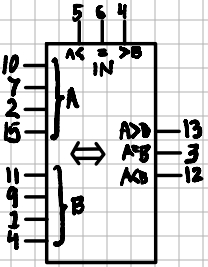
500, 200, 140ns



625, 250, 175ns

CD4585

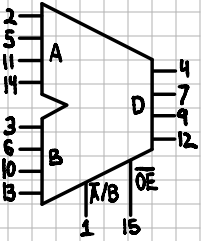
200, 80, 60ns



300, 125, 80ns

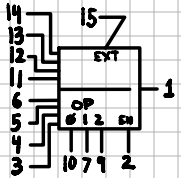
CD40257

A/B: 290, 85, 65ns
OE: 95, 50, 40ns



150, 70, 50ns

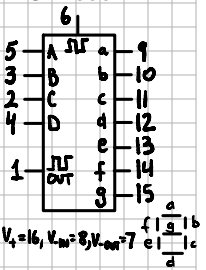
CD4048



X,0: 300, 150, 120ns
1: 225, 85, 55ns
2: 140, 50, 40ns
EXT: 190, 90, 65ns

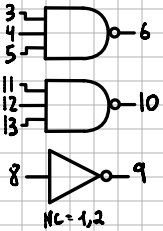
OP	EXT GATE
0-NOR	xOR
1-OR	xOR
2-AND	xNAND
3-NAND	xNAND
4-OR/AND	xNOR
5-OR/NAND	xNOR
6-AND/NOR	xAND
7-AND/OR	xAND

CD4055



600, 575, 375ns

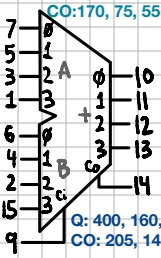
MC14000U



115, 55, 40ns

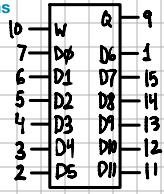
CD4008

Q: 375, 155, 115ns
CO:170, 75, 55ns

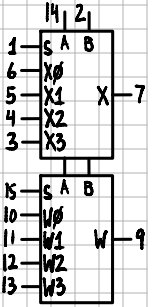


Q: 400, 160, 115ns
CO: 205, 145, 110ns

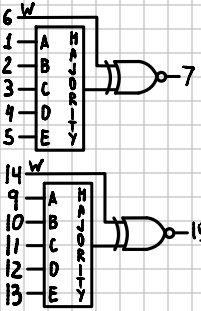
MC14531



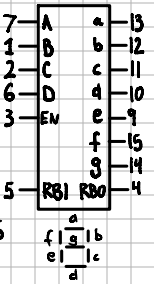
MC14539



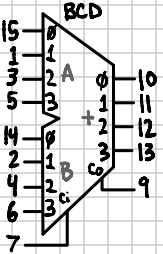
MC14530



MC14558

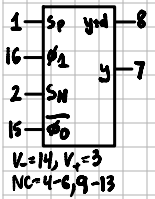


MC14560



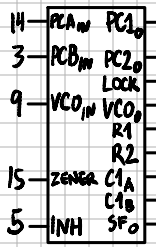
Q: 750, 330, 220ns
CO: 650, 230, 170ns
CO: 550, 220, 160ns

CD4045



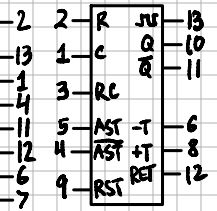
> 5, 12, 15MHz

CD4046



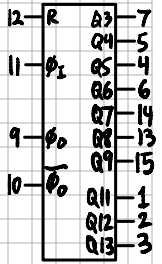
> 0.5, 1, 1.4MHz@R1=5k

CD4047



< 0.8MHz

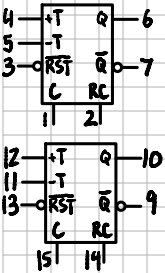
CD4060



> 3.5, 8, 12MHz

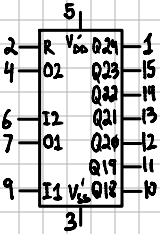
CD4098

CD14538



T 140, 60, 40ns

CD4521

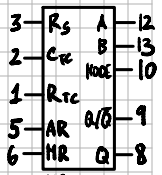


< 2, 5, 6.5MHz

CD4536

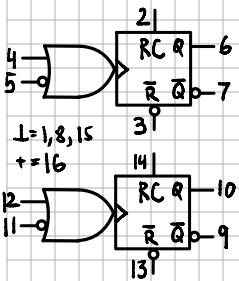
> 0.5, 1.5, 2.5MHz

CD4541



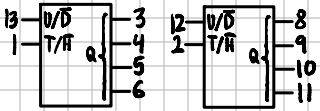
1.5, 4, 6MHz

CD4528



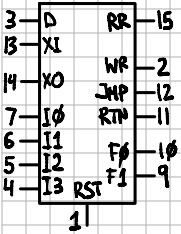
CD40117

TERMINATOR/ BUS HOLD



>10ns Q PULSE WIDTH
U/D 1600, 700, 500ns

MC14500

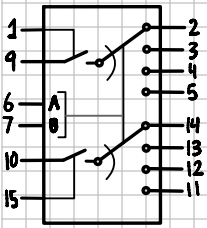


DC-1MHz @ 5V

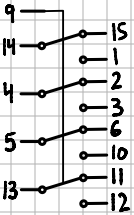
MC14549 MC14559

> 0.8, 1.5, 2.0MHz

MC14529



MC14551



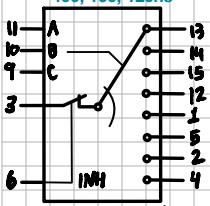
Special

Analog

rev 2

CD4051

400, 160, 120ns

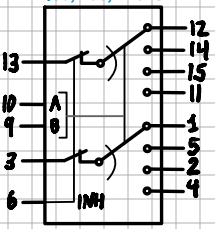


$V_- = 7, \perp = 8, V^+ = 16$

450, 160, 120ns

CD4052

400, 160, 120ns

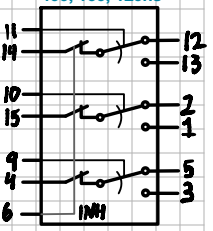


$V_- = 7, \perp = 8, V^+ = 16$

450, 160, 120ns

CD4053

400, 160, 120ns



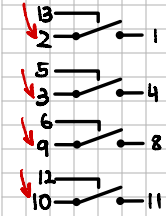
$V_- = 7, \perp = 8, V^+ = 16$

450, 160, 120ns

CD4016 - 100pA

CD4066 - 470,180,125Ω

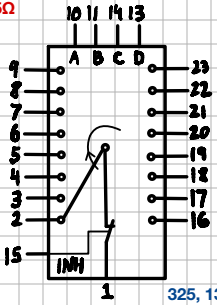
4066: Use as inputs when output is heavily loaded.



35, 20, 15ns

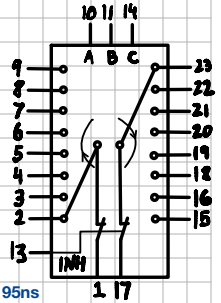
6, 9, 9.5 MHz

CD4067

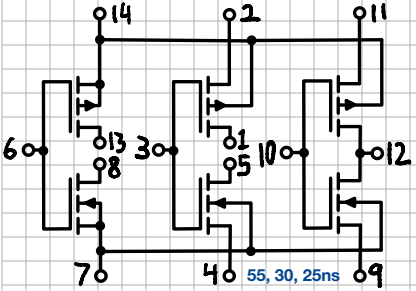


325, 135, 95ns

CD4097

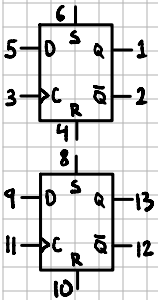


CD4007U



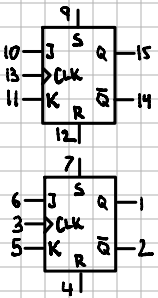
55, 30, 25ns

CD4013



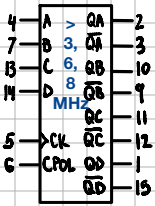
>3.5, 8, 12MHz

CD4027



>3.5, 8, 12MHz

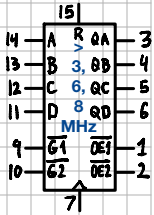
CD4042



3, 6, 8 MHz

CK: 250, 115, 90ns

CD4076

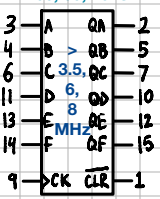


3, 6, 8 MHz

CK: 300, 125, 90ns

CD40174

100, 50, 40ns

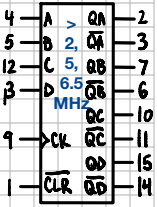


3.5, 6, 8 MHz

CK: 150, 70, 50ns

CD40175

325, 130, 100ns

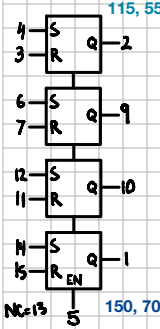


2, 5, 6.5 MHz

CK: 220, 90, 75ns

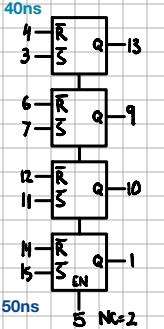
CD4043

115, 55, 40ns

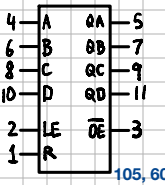


150, 70, 50ns

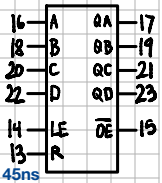
CD4044



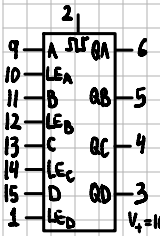
CD4508



105, 60, 45ns

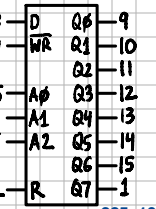


CD4054



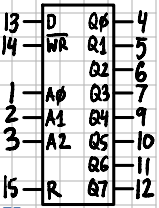
CD4056

CD4099



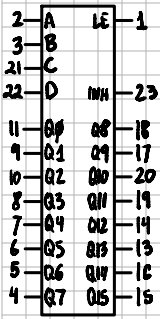
225, 100, 75ns

CD4724



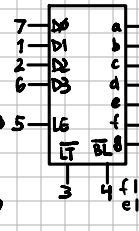
CD4514
CD4515

INH 250, 110, 85ns



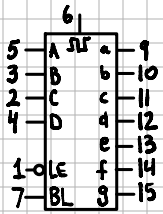
485, 185, 135ns

CD4511

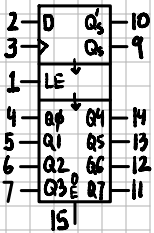


4514: TRUE Q
4515: COMPL $\overline{Q}$

CD4543



CD4094

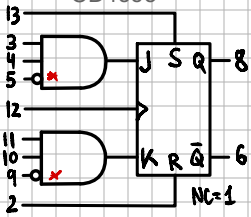


1.25, 2.5, 3MHz
CK: 420, 195, 135ns
LE: 290, 145, 100ns

CD40105

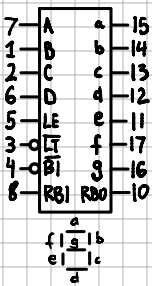
> 1.5, 3, 4MHz

CD4095
CD4096

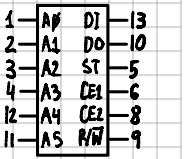


* 4095: TRUE
4096: INVERTING

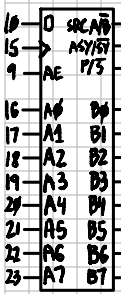
MC15413



HEF4505

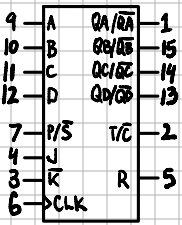


CD4034



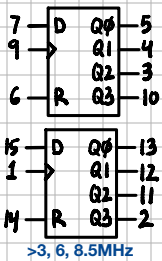
>2, 5, 7MHz

CD4035



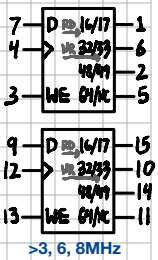
>2, 6, 8MHz

CD4015



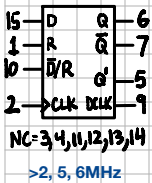
>3, 6, 8.5MHz

CD4517



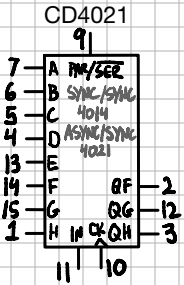
>3, 6, 8MHz

CD4031



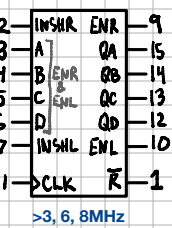
>2, 5, 6MHz

CD4014
CD4021



>3, 6, 8.5MHz

CD40194

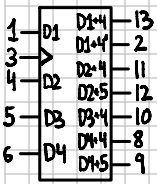


>3, 6, 8MHz

MC14557

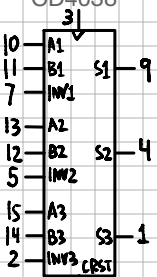
>1.7, 5, 6.7MHz

CD4006
CD4006B-MIL



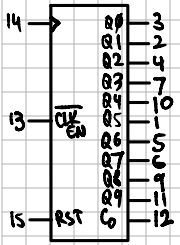
>2.5, 5, 7MHz

CD4032
CD4038



>2.5, 5, 7.5MHz

CD4017

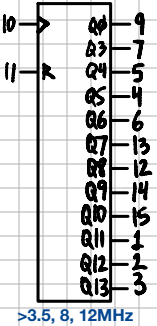


>2.5, 5, 5.5MHz

CD4018

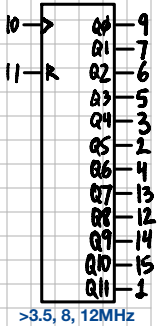
>3, 7, 8.5MHz

CD4020



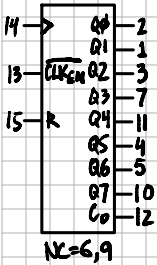
>3.5, 8, 12MHz

CD4040



>3.5, 8, 12MHz

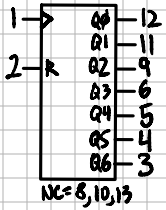
CD4022



NC=6,9

>2.5, 5, 5.5MHz

CD4024



NC=8,10,13

>3.5, 8, 12MHz

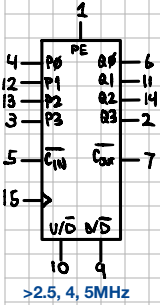
CD4026

>2.5, 5.5, 8MHz

CD4033

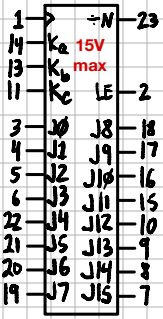
>2.5, 5.5, 8MHz

CD4029



>2.5, 4, 5MHz

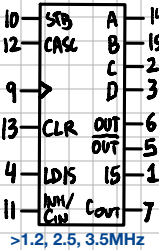
CD4059A



15V max

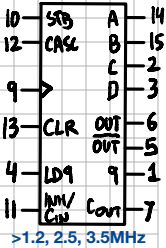
>1.5, 3MHz

CD4089



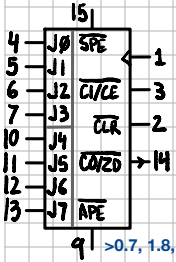
>1.2, 2.5, 3.5MHz

CD4527



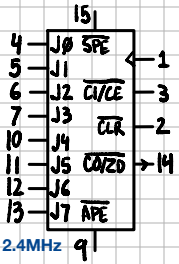
>1.2, 2.5, 3.5MHz

CD40102



>0.7, 1.8, 2.4MHz

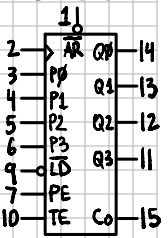
CD40103



CD40110

>1, 3, 5MHz

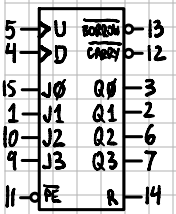
CD40160
CD40161



160: DECADE
161: BINARY

>2, 5.5, 8MHz

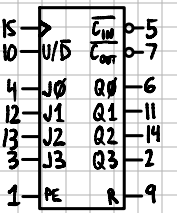
CD40192
CD40193



192: BCD
193: BINARY

>2, 4, 5.5MHz

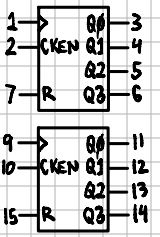
CD4510
CD4516



510: BCD
516: BINARY

>2, 4, 5.5MHz

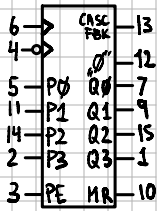
CD4518
CD4520



518: BCD
520: BINARY

>1.5, 3, 4MHz

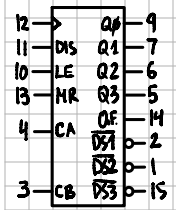
CD4522
HEF4526



522: BCD
526: BINARY

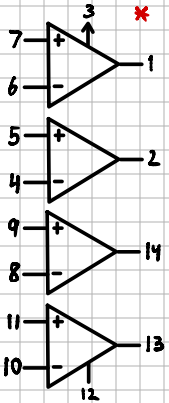
>1.5, 3, 4MHz

MC14553

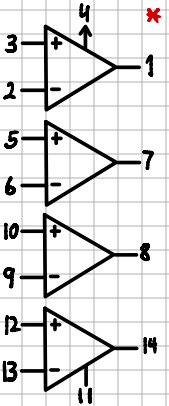


>0.9, 2.5, 3.5MHz

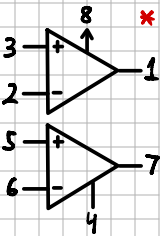
LM139,239,339,2901
comparators



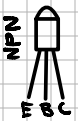
LM124,224,324,2902
op-amps



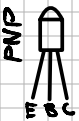
LM158,258,358,
LM2904, TLC272
op-amps
LM193,293,393,
LM2903
comparators



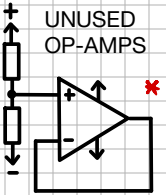
PN2222
ZTX455



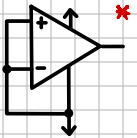
PN2907
ZTX555



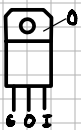
UNUSED
OP-AMPS



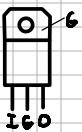
UNUSED
COMPARATORS



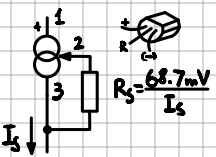
LD1117
LDnnV



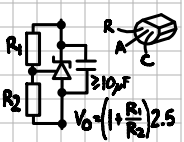
78nn



LM334



TL431A



Analog

rev 0

4001BE	4x2NOR
4002BE	2x4NOR
4007UBE	2x MOS PAIR, INV
14008BCBE	FULL ADDER
4009UBE	6x INV
4010BE	6x BUF
4011BE	4x2NAND
4012BE	2x4NAND
4013BE	2x DFF
4014BE	8STG SHR
4015BE	2x4STG SHR
4016BE	4x ASW 100pA
4017BE	DEC CTR + LD OUT
4018BE	÷N CTR
4019BE	4x AND/OR SEL
4020BE	14STG RPL CTR
4021BE	8BIT SHR
4022BE	OCTAL CTR
4023BE	3x3NAND
4024BE	7STG RPL CTR
4025BE	3x3NOR

i

4026BE		• CTR+7SEG
4027BE		• 2×JK MS FF
4028BE		• BCD-10/8 DEC
4029BE		• U/D PR CTR
4030BE		• 4×2XOR
4031BE		• 4STG 64B SHR
4033BE		• CTR+7SEG
4034BM	AE	• 8BIT BUS SHR+REG
4035BE		• 4STG PAR/SER REG
4040BE		• 12STG RPL CTR
4041UBE		• 4×BUF w/CPL
4042BE		• 4×D LATCH
4043BE		• 4×NOR SR LATCH
4044BE		• 4×NAND SR LATCH
4045BE		• 21 STG CTR
4046BE		• 2×PHS DET, VCO=PLL
4047BE		• ASTABLE MVBR
4048BE		• EXP CFG SUPERGATE
4049UBE		• 6×INV XLTR
4050BE		• 6×BUF XLTR

4051 BE	8CH AMUX
4052 BE	2×4CH AMUX
4053 BE	3×2CH AMUX
4054 BE	4BIT LATCH+LCD DRV
4055 BE	BCD→7SEG LCD DRV
4056 BE	BCD→7SEG LTCH LCD DRV
4059 AM	PROG ÷N
4060 BE	14STG RPL CTR+OSC
4063 BE	4BIT MAGN CMP
4066 BE	4×ANALOG SW
4067 BM	16CH AMUX
4068 BE	8 AND/NAND
4069 UBE	6×INV
4070 BE	4×2XOR
4071 BE	4×2OR
4072 BE	2×4OR
4073 BE	3×3AND
4075 BE	3×3OR
4076 BE	4×DFF TRIS+2×IN DIS
4077 BE	4×2XNOR

4078BE	8OR/NOR
4081BE	4×2AND
4082BE	2×4AND
4085BE	2×2AND+NOR w/INH
4086BE	4×2AND+NOR w/EXP+INH
4089BE	RATE MULT
4093BE	4×2NAND
4094BE	8STG SHR+STORE
4097BM	DIFF 8CH ANUX
4098BE	2×1SHOT
4099BE	8BIT ADDR LATCH
40102BE	8STG 2DEC BCD CTR
40103BE	8STG 8BIT SYNC DCTR
40105BE	4×16W FIFO
40106BE	6×INV
40107BE	2×2NAND
40109BE	4×BUF XLTR
40110BE	U/D CTR+LED DRVR
40117BE	PROG 2×4BIT TERM
40147BE	10→4 PRIORITY DEC

40160BFBE	• 4BIT PRG SYNC 10 CTR
40161BE	• 4BIT PRG SYNC CTR
40174BE	• 4×D FF
40175BE	• 4×D FF'
40192BE	• BCD U/D PRS CTR
40193BE	• BIN U/D PRS CTR
40194BE	• 4BIT BIDIR SHR
40257BE	• 4×2:1 SEL
4502BE	• 6×INV TRIS
4503BE	• 6×BUF TRIS
4504BE	• 6×BUF XLTR
4508BNS	• 2×4BIT LATCH
4510BE	• PRS U/D CTR
4511BE	• BCD-7SEG DEC+...
4512BE	• 8MUX TRIS
4514BM	• 4BIT LATCH+DEC Q
4515BM	• 4BIT LATCH+DEC $\overline{Q}$
4516BE	• PRS U/D CTR
4517BE	• 64BIT SHR
4518BE	• BCD UP CTR

4520BE	2x 4BIT UP CTR
4521BE	24SIG FREQ DIV
4522BE	PROG BCD ÷N
4527BE	BCD RATE MULT
4532BE	8BIT PRIORITY
4536BE	PROG TMR
14538BE	2x RETRG MONO
4541BE	PROG TIMER
4543BE	BCD→7SEG LCD
4555BE	2x 1:4 DECODER Q
4556BE	2x 1:4 DECODER $\overline{Q}$
4572UBE	4x INV, NAND, NOR
4585BE	4 BIT MAGN CMP
4724BE	8 BIT ADDR LTCH

4000		2×3NOR, NOT	≈4025
4006		18ST SHR	
4032	BE	3× SERIAL ADDER CY∫	
4038		3× SERIAL ADDER CY∑	
4095		GATED JK FF	≈4027+
4096		GATED JK FF Q,$\overline{Q}$	≈4073+
14500		1-BIT PLC	
4505		64 BIT RAM	
14513		7SEG DEC+...	
4519	BCN	4× AND/OR SEL	=4019
4526		PROG 4BIT DN CTR	
4528		2× RETRIG MONO	
4529		2× 4AMUX	≈4052
4530		2× 5MAJORITY	
4531		12 BIT PARITY	
4539		2× 4IN MUX	≈4052+
4549		SAR	
4551		2CH AMUX	
4553		3-DIGIT BCD CTR	

≈ SAME FN, DIFF PINOUT = DIRECT SUBST

4557	1÷64 STAGE SHR
4558	BCD→7SEG
4559	SAR
14584	6x SCHMITT INV
14560	BCD ADDER
14561	9s COMPLEMENTER
14566	INDUSTRIAL TB GEN